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jc780 U.S. PTO
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CERTIFICATE OF EXPRESS MAILING

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Attorney Docket No.: MLLTP006

First Named Inventor: Geoffrey W. Simons

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09/523410
03/10/00

UTILITY PATENT APPLICATION TRANSMITTAL (37 CFR. § 1.53(b))
(Regular application claiming priority of a provisional)

Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

☒ Duplicate for
fee processing

Sir: This is a request for filing a patent application under 37 CFR. § 1.53(b) in the name of inventors:
GEOFFREY W. SIMONS

For: **Method and Apparatus for Online Information Sharing for Completing Electronic Forms**

Priority of U.S. Provisional Application No. 60/123,605 filed on March 10, 1999 is claimed under 35 U.S.C. § 119(e).

Application Elements:

- ☒ 30 Pages of Specification, Claims and Abstract
- ☒ 09 Sheets of **informal** Drawings
- ☒ 02 Combined Declaration and Power of Attorney (**unexecuted**)
- ☐ Separate Declaration

Accompanying Application Parts:

- ☐ Assignment and Assignment Recordation Cover Sheet (recording fee of \$40.00 enclosed)
- ☐ Separate Power of Attorney by Assignee
- ☐ 37 CFR 3.73(b) Statement by Assignee
- ☐ Information Disclosure Statement with Form PTO-1449
- ☐ Copies of IDS Citations
- ☐ Preliminary Amendment
- ☐ Small Entity Statement(s)
- ☐ Other:

Claim For Foreign Priority

☐ Priority of _____ Application No. _____ filed on _____ is claimed under 35 U.S.C. § 119.

☐ The certified copy is enclosed.

☐ The certified copy will follow.

☐ Amend the specification by inserting before the first line the sentence:

"This application claims the benefit of U.S. Provisional Application No. _____ filed on _____, the disclosure of which is incorporated herein by reference."

Fee Calculation (37 CFR § 1.16)

	(Col. 1) NO. FILED	(Col. 2) NO. EXTRA	SMALL ENTITY RATE FEE	OR	LARGE ENTITY RATE FEE
BASIC FEE			\$345 \$	OR	\$690 \$
TOTAL CLAIMS	_____ -20 = _____		x9 = \$	OR	x18 = \$
INDEP CLAIMS	_____ -03 = _____		x39 = \$	OR	x78 = \$
[] Multiple Dependent Claim Presented			\$130 = \$	OR	\$260 = \$
* If the difference in Col. 1 is less than zero, enter "0" in Col. 2.			Total \$	OR	Total \$

☒ **PLEASE DEFER FILING FEES AT THIS TIME.**

☐ The Commissioner is authorized to charge any fees beyond the amount enclosed which may be required, or to credit any overpayment, to Deposit Account No. 50-0388 (Order No. _____).

General Authorization for Petition for Extension of Time (37 CFR §1.136)

☒ Applicants hereby make and generally authorize any Petitions for Extensions of Time as may be needed for any subsequent filings. The Commissioner is also authorized to charge any extension fees under 37 CFR §1.17 as may be needed to Deposit Account No. 50-0388 (Order No. **MLLTP006**).

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Express Mail No. EL132533896US

PATENT APPLICATION

METHOD FOR ONLINE INFORMATION SHARING FOR
COMPLETING ELECTRONIC FORMS

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METHOD FOR ONLINE INFORMATION SHARING FOR COMPLETING ELECTRONIC FORMS

CROSS-REFERENCE TO RELATED APPLICATION

5 This application claims the benefit of priority under 35 USC §119(e) to provisional Patent Application No. 60/123,605, filed March 10, 1999, naming Geoffrey W. Simons as inventor.

 U.S. Application No. 09/231,644, filed January 15, 1999 (Atty. Docket
10 No. MLLTP001), commonly owned, is incorporated by reference herein for all purposes.

BACKGROUND OF THE INVENTION

 The present invention relates generally to computer software for filling
out form documents over a computer network. More particularly, the present
15 invention provides a method and system for sharing information among users for the purpose of automatically filling out fields in an electronic form document.

 The present invention describes a process for purchasing goods and
services over an electronic computer network, namely the World Wide Web,
20 for the purpose of Gift Shopping. Gift Shopping is defined as the act of buying a good or a service (the Product) for another person. Within the scope of the electronic computer network, Gift Shopping entails that the Gift Giver release personal information pertaining to the billing of the Product, and that the Gift Recipient release personal information pertaining to the shipping,
25 size, and type of the Product.

 Thus, it is desirable to be able to share personal information with other users on a network. In such a system, a gift giver, for example, can access certain items of information, collectively referred to as a persona, which a gift

receiver has indicated can be accessed by others. A user can have a number of personas, each one used by a group of other users or one other user.

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SUMMARY OF THE INVENTION

To achieve the foregoing, methods, apparatus, and computer-readable
mediums are disclosed which provide an online shopper can share information
5 with intended gift receivers. The information sharing can be used on
numerous non-affiliated sites. That is, the sites at which the goods are
purchased do not have to be within, for example, a portal's shopping mall or
any type of "walled garden." Thus, the online gift giver can access
information of gift receivers from a wide variety of non-associated and non-
10 affiliated sites. While there are features similar to information sharing within
restricted online shopping malls and networks of sites, information sharing
outside these confines is presently unavailable.

The present invention is a technique use to gather information from
different sources to be used to automatically fill in online forms. The
15 information is collected using a persona of an individual. A persona is created
by filtering a larger set of raw data for that user so that only certain fields are
allowed to be seen and used by others. An individual can have several
personas, each assigned to a particular other individual, such as a family
member or a friend. The individual allowing one of his personas to be shared
20 is the information provider and the user requesting the information is the
information requester. The information is taken from both the provider and
requester, and used by a vendor in a form, filled out by the information
requester. In one embodiment, the information requester is a "gift giver" and
the provider is a "gift receiver." The gift giver is requesting shipping and
25 other information from the gift receiver, who can grant one of his personas to
the particular gift giver. The information, along with billing information from
the gift giver, is used to fill out a vendor online form.

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In one aspect of the invention a method of allowing an information requester, such as a gift giver, to access data from an information provider, such as a gift receiver, in order to complete an online merchant form is described. A filtered data set is created that contains data the information

5 provider is willing to share with particular third-party users, including the information requester. An online merchant form is retrieved from a merchant or service provider site upon request by an information requester, the online merchant form having numerous fields. Data from the information requester is inserted into the appropriate fields in the form, such as billing information.

10 Access to the filtered data set is granted by the information provider to the information requester. This enables data from the filtered data set to be inserted into the appropriate fields in the form, such as shipping information. The online form being filled out is from an online merchant or service provider that is not necessarily affiliated with other online merchants, such as

15 being in an online shopping mall, a “walled garden,” or network of sites associated with a portal.

Brief Description of the Drawings

The invention will be better understood by reference to the following description taken in conjunction with the accompanying drawings in which:

FIG. 1A is a diagrammatical representation of a system for
5 automatically filling in electronic form documents in accordance with one embodiment of the present invention.

FIG. 1B is a block diagram showing components of a server enabling the automatic insertion of data in to an electronic form on a remote computer in accordance with one embodiment of the present invention.

10 FIG. 2 is a flow diagram of a process for automatically filling in an electronic form document in accordance with one embodiment of the present invention.

FIGS. 3A, 3B, and 3C are table diagrams showing the field names and format of registered user data in accordance with one embodiment of the
15 present invention.

FIG. 4 is a sequence diagram outlining a process of conducting purchasing gifts over a distributed network in accordance with one embodiment of the present invention.

FIG. 5 is a flowchart describing a privacy negotiation for gathering
20 information associated with purchasing gifts over a distributed network in accordance with one embodiment of the present invention.

FIG. 6 is a block diagram showing the various parties and possible message passing between the parties in accordance with one embodiment of the present invention.

DETAILED DESCRIPTION

Reference will now be made in detail to a preferred embodiment of the invention. An example of the preferred embodiment is illustrated in the accompanying drawings. While the invention will be described in conjunction with a preferred embodiment, it will be understood that it is not intended to limit the invention to one preferred embodiment. To the contrary, it is intended to cover alternatives, modifications, and equivalents as may be included within the spirit and scope of the invention as defined by the appended claims.

10 A method and system for automatically filling in electronic forms on a computer and not requiring a user to download or install any resident software on the computer is described in the various figures. As the presence of merchants and services increases on the Internet, electronic commerce or e-commerce will grow. More and more consumers will resort to the Internet, 15 for example, to purchase goods and services for themselves or others (e.g., gift shopping). This will typically require the consumer/user to provide at least some data, either the users own or another individuals, to the merchant typically through filling out an electronic form having various fields, most commonly names, addresses, credit card numbers, phone numbers, etc. For 20 consumers purchasing goods from numerous merchant sites and possibly using different computers (e.g. using a computer at work, using another computer at home, and yet another one while travelling), manually filling in these forms repeatedly can become tedious and inefficient. The present invention seeks to alleviate the burden of filling in electronic forms, while 25 informing the consumer/user of privacy precautions taken by a particular merchant site, and not require the user to download any resident software.

Inherent in the latter feature is allowing the consumer to use the processes of the present invention from any computer connected to the network, the Internet in particular.

5 The present invention uses a remote server or "privacy bank," a novel electronic resource that responds to requests for data by preparing and transmitting a specialized document in the form of a JavaScript. This JavaScript is formed dynamically by the privacy bank upon receipt of the request for data. The JavaScript created by the privacy bank is a "profile" or mapping between field names in a particular form the user needs to fill in at a particular merchant site (*e.g.* "www.fishermanstore.com") and standardized field names stored in the privacy bank server. Once the user's browser program is served this profile from privacy bank, most of the fields in the fishermanstore form are automatically filled in. In the described embodiment, the user becomes a member of the privacy bank resource by providing personal information, also referred to as the raw data, to privacy bank once. 15 This raw data can be updated from time to time by the user if desired. In addition, several filtered raw data sets or "personas" can be created for use by others who may need to access the user's information. In another embodiment, the user can enter privacy rules or requirements once when initially becoming a member. The user does not need to download any software from privacy bank or any other resource. In the described embodiment, the merchant (*e.g.* The Fisherman Store) becomes an affiliate member of the privacy bank network by providing a sample document of its form or forms. Privacy bank can then build a mapping between fields in the merchant's form and the standardized fields in its own database. 25

FIG. 1A is a block diagram of a system for automatically filling out electronic form documents in accordance with one embodiment of the present

As stated earlier, it is assumed in this discussion that www.fishermanstore.com is registered with and thus an affiliate member of the privacy bank service assessable from privacy bank server 108. Being an affiliate member of the privacy bank service, purchasing form 116 contains a privacy bank icon or button 118. By clicking on privacy bank icon 118, user 102 essentially completes a process for automatically filling in form 116 by transparently transmitting a completed form to the privacy bank service on server 108, depicted by an arrow 120. The information needed for filling in the form is transmitted to user 102 once form 116 (an HTML document) is parsed, which occurs when form 116 is downloaded. This process is described in greater detail in FIG. 4. User 102 informs privacy bank server 108 of the identity of the user and of which Web site and which form on that Web site (if more than one) the user wishes to have filled in. This information is transmitted to privacy bank server 108, unbeknownst to user 102, when form 116 is downloaded. Techniques for accomplishing this are described below. Once privacy bank server 108 receives a request from registered user 102 (by virtue of an external link in form 116 executed when the form is parsed by user 102), it begins preparing information needed to fill in form 116 on user computer 102. In the described embodiment, the information sent to user computer 102 is a JavaScript program 124 referred to as a "profile." Explained briefly, this profile contains a mapping of privacy bank standardized fields and fields in purchasing form 116 and "raw," generally personal, data associated with user 102. The content of this profile and JavaScript program in general is described in greater detail in FIGS 7A and 7B below. Once received by the browser program on user computer 102, the filled out purchasing form 116 is displayed to user 102 as depicted by arrow 126. This occurs when user 102 presses or clicks on privacy bank icon 118.

1 The information needed to complete form 116 is already resident in the
2 browser program. At this juncture, user 102 can decide whether to proceed
3 with submitting the form (typically after filling out a few more fields such as
4 which items to purchase, quantity, etc.) or declining to submit the form,
5 perhaps after reviewing the fishermanstore's Web site privacy safeguards or
6 for any other reason.

7
8
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10 FIG. 1B is a block diagram showing components of a privacy bank
11 server enabling the automatic filling in of electronic forms on a remote user
12 computer. A privacy bank server, such as server 108 in FIG. 1A, contains
13 several functional and storage components needed for compiling the data
14 needed for filing in a form, such as form 116. Shown in FIG. 1B are four
15 major components of a privacy bank server in the described embodiment.
16 These components and storage areas include a raw data profile storage area
17 128, a form mapping storage area 130, a negotiation history module 132, and
18 a shippable code constructor 134. Raw data profile storage area 128 contains
19 sets of data relating to registered users of the privacy bank service, one set or
20 profile shown in area 136. A registered user has a unique account number that
21 can be used as an identifier and a password, shown in an area 138. The
22 standard field names set by the privacy bank service, discussed in greater
23 detail in FIGS. 8A, 8B, and 8C, are paired with a user entered data string
24 (such as first name or home street address), followed by a use-preference
25 condition. This data is contained in an area 140. Another profile for another
26 registered user is shown in an area 142. Each registered user has a similar raw
27 data profile.

28 Form mapping area 130 includes multiple form mappings, an example
29 of which is shown in an area 144. Each electronic form that is registered with
30 the privacy bank service by an online merchant or seller (*i.e.* an affiliate

member) has a form mapping. A privacy bank standard field name, as discussed below in FIGS. 3A, 3B, and 3C, and as mentioned above in area 140, is matched or mapped with a "non-standard" field name from the electronic form registered with the service. For example, a non-standard field name for a person's last name could be "Last Name," "Surname" or simply "Last." Different forms use different variations of names for this field and for other fields. This would be mapped against the privacy bank "standard" field name, which in the described embodiment, is "PersonName.Last." Also contained in area 146 is a practice-preference condition provided by the online merchant or seller when registering the form. As with the use-preference condition in area 140, this condition is used by negotiation history module 150 and shippable code constructor 134, and is discussed in greater detail below in FIG. 7. Another mapping 148 having the same format for another registered form follows area 144.

Negotiation history module 132 is used to determine which fields in the electronic form will be automatically filled in by the privacy bank server. A process associated with negotiation history module 132 is described in greater detail in FIG. 7. Module 132 includes multiple negotiation objects, an example of which is shown in an area 150. In the described embodiment, each negotiation object corresponds to one "non-standard" field in the form. Described briefly, negotiation object 150 contains information as to whether the field in the form should be filled in based on privacy and use preferences set by the user (as conveyed in use-preference condition in area 140) and compared to intended practices (as conveyed by practice-preference condition in area 146). This comparison is performed in the negotiation history module, which includes a negotiator or comparator for comparing these conditions. Specific conditions in the described embodiment are described below. If it is

determined that the non-standard field in the form will be filled in, a data string, shown in area 140, will be included in negotiation object 150.

Shippable code constructor 134 accesses component 132 and storage areas 128 and 130, to derive a software module to be transmitted to a user computer.

- 5 In the described embodiment, the software module is a JavaScript program which is transmitted to and executed by a browser in the user computer, thereby inserting the data strings into the form fields.

FIG. 2 is a flow diagram of a process for automatically filling in electronic forms in a computer network in accordance with one embodiment of the present invention. The process described below can be performed in a configuration of servers and computers as described in FIG. 1A above. At a step 202 an online user/consumer desiring to purchase certain goods on the Internet downloads an electronic form for making a purchase into the user's browser program. At step 204 the browser parses the electronic form content, typically an HTML document, to identify all external links. As is commonplace for Web pages, the HTML contains links to other external Web sites from which content or other types of data is retrieved. In many instances, a Web page is a composite of different components from various sites embedded in a core HTML document. An example is an external link to an ad server to retrieve a banner ad component of a core HTML document. In this case, the electronic form can be seen as a core HTML document. This parsing is done automatically by the browser and is a well known feature.

At step 206 the browser identifies an external link to the privacy bank server. In the described embodiment, this link will necessarily be present since the Web site is an affiliated site of the privacy bank service network of registered sites. A description of what "registered" implies in this context is described in greater detail below. At step 208, the browser executes the

At step 236, the user visually examines the filled out form and the privacy features offered by the Web site and decides whether the form is acceptable. If the user finds that the form needs further adjustment, the user
20 adjusts the document at step 238. This may be done manually, or through any supplemental automated process, such as a client-based macro. This can involve filling in fields that could not be filled in by the profile sent by the privacy bank server (in other words, fields that could not be filled out from the raw data). Such fields can include, for example, which items being purchased
25 and the quantity of items. It can also include updated personal information such as a new address or credit card number. In this case, the user simply types over the information already in the fields. Control then returns to step

236, which is satisfied presumably after going through step 238 once. At step 240 the browser submits the filled out electronic form eventually sending it to the merchant's Web server once the user clicks on a Submit form button in the browser window.. In the described embodiment, the filled out form is first

5 sent to the privacy bank server unbeknownst to the user or at least transparent to the user. The completed form is received and examined by the privacy bank server which updates its raw data repository to reflect any changes the user may have made to his or her personal information. The privacy bank server then posts a message back to the user computer (according to HTTP

10 protocol the server must send a message back to the user computer when it receives an HTML document from it). In the described embodiment, the message it sends back or posts to the user's browser is similar to a "Click Here To Continue" type screen to the user. Hidden behind this message is the completed form that was sent to the privacy bank server. Presumably, the user

15 will click to continue and by doing so transmits the hidden completed form to the merchant's Web server. In other preferred embodiments, the completed form is sent to both the privacy bank server and the merchant's Web server at the same time. In yet another preferred embodiment, the completed form is posted automatically from the privacy bank server directly to the merchant's

20 site without any additional input from the user. At this stage the automatic form filling process is complete.

FIGS. 3A, 3B, and 3C are high-level table diagrams showing how fields containing the raw data and preferences for a user are organized on the privacy bank server in accordance with one embodiment of the present

25 invention. A top-level User table 302 has four columns: User 304, Category 306, Type 308, and Short display name 310. User Table 302 has four areas of data under column User 304 represented by four rows: Home 312, Work 314,

Skipping Category 306 for the moment, column Type 308 takes the raw data tree down one level from the top level represented by table 302. For example, the Type for data area Home 312 is Info. This performs as a pointer or link to an Info table 320. The first column 322 of table 320 is labeled Info but the other three columns are the same as shown in table 302; that is, Category 306, Type 308, and Short display name 310.

At table 320, the user begins entering data that will be used for her home information and for Shipping since data area 318 for Shipping in table 302 also has an Info in its Type column 308. A Name row 322 has in its Type column 308 a reference to yet another table PersonName, shown as table 324. Similar to table 302 and 320, PersonName table 324 has a first column labeled PersonName and the same three columns as the other tables. All five data areas in PersonName table 324: Prefix, First, Middle, Last, and Suffix have as a Type a primitive type referred to as Text in the described embodiment. Text represents a data string that is the actual data item stored in the privacy bank server. By examining the Type column 308 of each of the data areas, a user enters all the raw personal data. An actual data item is entered at each Type box containing Text, indicating a primitive type, or a leaf node when viewed as a tree structure. If the Type column does not contain “Text,” another table exists that refines the data area further.

To follow another example, under the data area Billing 316 shown in table 302, its Type 308 indicates BillInfo and not Text. A table BillInfo has six further data areas, none of which have a Text Type, so no actual data values can be found at this level. Taking the CreditCard data area as an

example, its Type indicates "CreditCard." Table CreditCard, shown in FIG. 3C, has four data areas: Type, Number, ExpMonth, and ExpYear, all of which are of Type Text, which contain actual data values.

Short display name column 310 contains a string that is displayed to the user through a user registration graphical user interface of the described embodiment. The user follows the data tree via a user interface using the Short display name strings as field names or guides to entering the data. The data areas that have primitive Types, which in the described embodiment is Text, are the privacy bank field names that are mapped with the legacy field names in the electronic forms registered with the service. In the described embodiment, the privacy bank names include (in abbreviated form):

15	PersonName.Prefix PersonName.First PersonName.Last PersonName.Suffix	Address.Street1 Address.Street2 Address.City Address.StateProv Address.PostalCode Address.Country	PhoneNum.AreaCode PhoneNum.Number PhoneNum.Extension
20	Internet.Email Internet.HomePage	Employment.Employer Employment.Department Employment.JobTitle	
25	CreditCard.Type CreditCard.Number CreditCard.ExpMonth CreditCard.ExpYear		

Category column 306 is related to privacy settings set by the user and are tied to the preferences set by a user and defined in terms of the conditions as described above. The conditions or use thresholds in the described embodiment are marketing (targeted), system administration, personalization, research and development, and completion of activity (*i.e.* ordering). The Categories available in the described embodiment and as shown in the tables of FIGS. 3A, 3B, and 3C, are Physical Contact Information, Online Contact Information, Demographic Data, and Financial Data. The relationship

between the Categories and the conditions of the described embodiment can be described as a table five-row, four-column table (a 20 cell table) where each condition is one row in the table and each Category is one column in the table.

5 The present invention is an extension to a Form AutoFill Server using Personal Information sharing between Individuals to fill in electronic forms that are a part of the Form AutoFill and/or Gift Shopping service (the Service). The Form AutoFill Server is used to dispatch JavaScript code to the Web Browser, which enables the form to be filled. The Form AutoFill Server is a use of a Light Code Server, which serves Shippable Code Segments that
10 are executed on the Web Browser's machine. By allowing Individuals to share their information with other Individuals, the Form AutoFill Server can provide data elements from two or more Individuals during a Privacy Negotiation (see *Privacy Negotiation*).

15 The essence of Gift Shopping is that more than one Persona is used to fill a form. A Persona is defined as a data repository containing an Individual's personal information along with the privacy preferences that indicate how the Individual wants his or her data treated. Users of the Service may have multiple Personae as well as permission to use parts of other
20 Individuals' Personae. There are two kinds of Gift Shopping that need to be covered. The first is Gift Shopping for people who are not necessarily subscribers/members of the Service. The second is Gift Shopping for people who are subscribers/members of the Service. In the latter case, we have to cover the mechanism for releasing permission to use a Persona of an
25 Individual by another Individual for Gift Shopping purposes.

FIG. 4 is a flow diagram of a process of an Individual (Gift Giver), who is Gift Shopping online and purchases a product from a Product Vendor

Information Buyer (Vendor's agent) and a single Information Seller (Individual's agent). In the case of Gift Shopping the Information Seller is a composite of Personae, which are separate Information Sellers. This composite Persona is achieved through a networked solution. A Message

- 5 Router is used to direct BIDs from the Information Buyer to the Information Seller that they apply to. Each Information Seller connected to the Router has a mask assigned which controls which BIDs route to them based on what part of the Service's personal information data schema is being requested. This is the same model as an electronic computer network router, which routes data
- 10 packets to a given machine based on the routing table of the router. Using this model allows for the individual Personae (Information Sellers) to respond to a BID based on the Privacy Preferences stored in the Persona that the BID gets routed to.

- FIG. 5 is a flow diagram of a Privacy Negotiation that begins by
- 15 requesting if the Information Buyer 501, which is an agent for the Vendor in the current model, has any more BIDs. If Yes, the Privacy Negotiation records the BID in its transaction history and forwards it to the Information Seller 502, which is a Message Router in the case of Gift Shopping. The Message Router receives the BID 503, and determines if it is intended for the Gift Giver's
- 20 Information Seller or the Gift Recipient's Information Seller based on the mappings that define Gift Shopping 504. In the instance there is no gift shopping, control from 503 goes straight to 508 where it is determined if the BID meets certain privacy preferences of the information seller. Returning to step 504, if the BID is intended for the Gift Giver's Information Seller, it
- 25 receives the BID 505. If the BID is intended for the Gift Recipient's Information Seller, it receives the BID 506. The BID is considered by the Information Seller that receives it 507. The Information Seller determines if

acts accordingly by either shipping out the goods or sending a message to the gift giver that the BIDS shipping information request was denied.

Although the foregoing invention has been described in some detail for purposes of clarity of understanding, it will be apparent that certain changes
5 and modifications may be practiced within the scope of the appended claims. Furthermore, it should be noted that there are alternative ways of implementing both the process and apparatus of the present invention. Accordingly, the present embodiments are to be considered as illustrative and not restrictive, and the invention is not to be limited to the details given
10 herein, but may be modified within the scope and equivalents of the appended claims.

CLAIMS

What is claimed is:

1. A method of sharing information in a computer network in which the
5 information is used to fill in online forms, the method comprising:
accessing a first primary data profile containing a non-filtered set of
data corresponding to a first user;
creating one or more secondary data profiles, wherein a secondary data
profile contains a filtered set of data, wherein the filtered set of data is taken
10 from the first primary data file; and
coalescing data from a secondary data profile and data from a second
primary data profile to construct a third data set wherein the third data set is
used to complete an online form such that certain data items required by the
form relating to the first user are taken from the secondary data profile portion
15 of the third data set.
2. A method of sharing information as recited in claim 1 wherein creating
one or more secondary data profiles further comprises selecting particular data
items from the non-filtered set of data that the first user intends to share with
20 one or more computer network users.
3. A method of sharing information as recited in claim 1 wherein creating
one or more secondary data profiles further comprises creating a secondary
data profile for a specific computer network user.
25
4. A method as recited in claim 3 wherein the specific computer network
user is a gift giver and the first user is a gift receiver.
5. A method as recited in claim 1 wherein a secondary data profile
30 inherits privacy preferences from data items in the first primary data profile.
6. A method as recited in claim 5 wherein privacy preferences attached to
the secondary data profile determine how the secondary data profile will be
used.

7. A method as recited in claim 1 wherein coalescing data from a secondary data profile and data from a second primary data profile further comprises taking data from the secondary data profile relating to shipping and specific characteristics of the first user and taking data from the second primary data profile relating to billing.

8. A method as recited in claim 1 further comprising automatically filling in an online form with data from the third data set once the first user has been selected by a second user.

9. A method as recited in claim 8 further comprising requesting access to use the secondary data profile in response to a notification to a fill in an online form.

10. A method as recited in claim 9 further comprising granting access to the secondary data profile thereby enabling a computer network user to fill in the online form.

11. A method of allowing an information requester to access data from an information provider in order to complete an online merchant form, the method comprising:

creating a filtered data set containing data the information provider is willing to share with particular third-party users, including the information requester;

retrieving an online merchant form upon request by an information requester, the online merchant form having a plurality of fields;

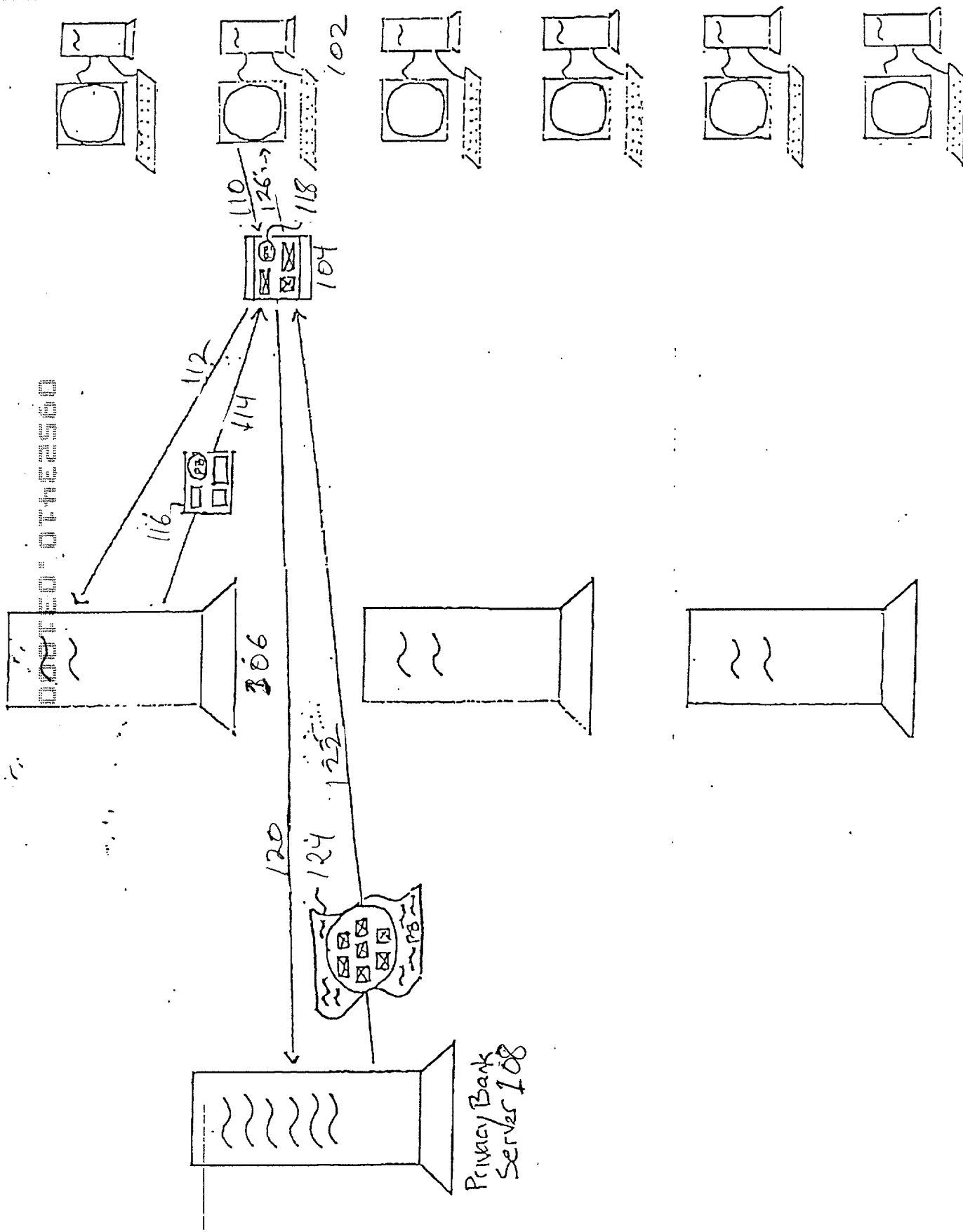
inserting data from the information requester into a first subset of the plurality of fields; and

granting access to the filtered data set by the information provider to the information requester so that data from the filtered data set is inserted into a second subset of the plurality of fields, wherein the online merchant form is from an online merchant not affiliated with any other online merchant.

12. A method as recited in claim 11 wherein the online merchant is not associated with a network or group of other online merchants.

ABSTRACT OF THE DISCLOSURE

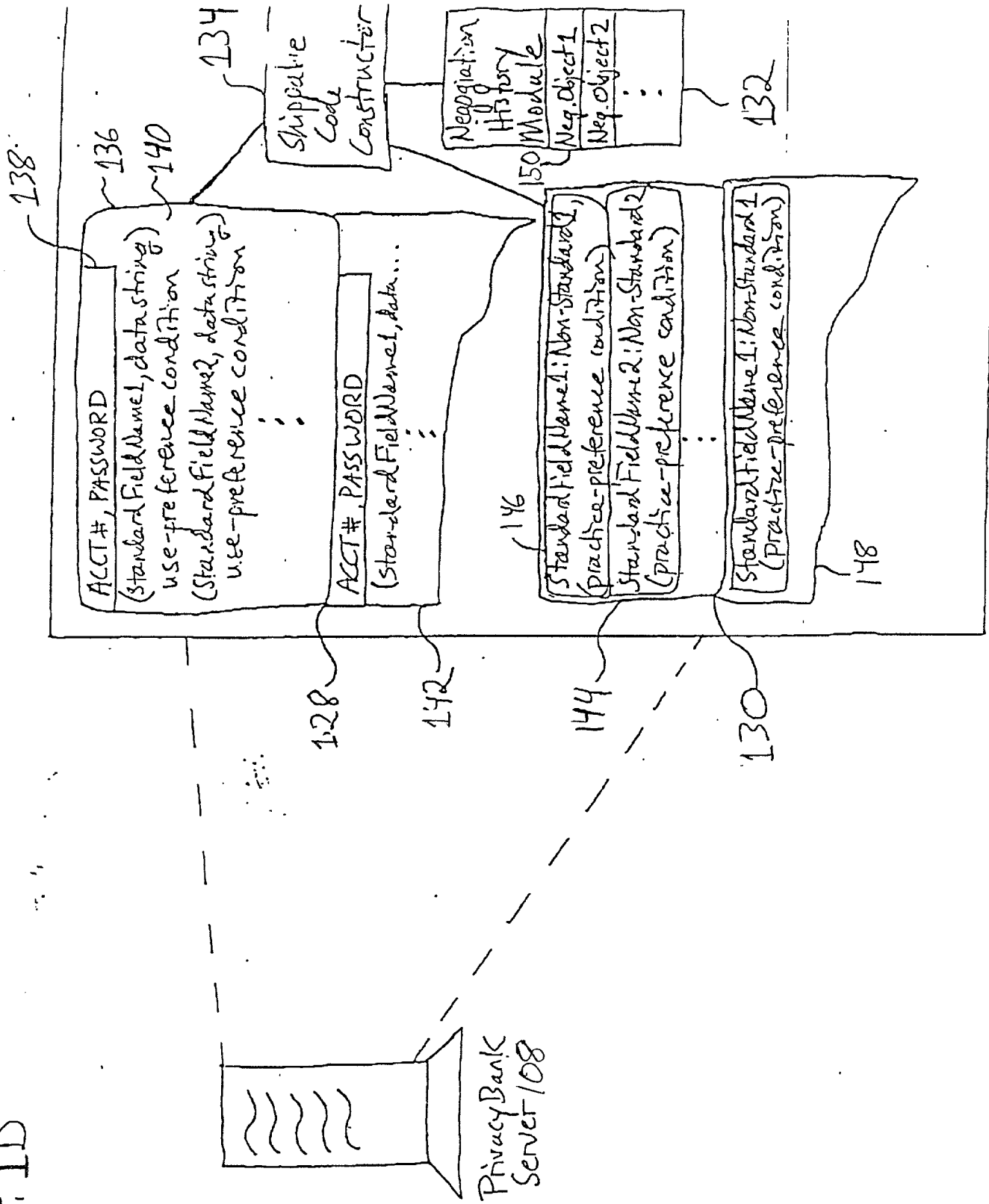
Methods are disclosed for gathering information from different sources to be used to automatically fill in online forms. The information is collected using a persona of an individual. A persona is created by filtering a larger set of raw data for that user so that only certain fields are allowed to be seen and used by others. An individual can have several personas, each assigned to a particular other individual, such as a family member or a friend. The individual allowing one of his personas to be shared is the information provider and the user requesting the information is the information requester. The information is taken from both the provider and requester, and used by a vendor in a form, filled out by the information requester. In one embodiment, the information requester is a "gift giver" and the provider is a "gift receiver." The gift giver is requesting shipping and other information from the gift receiver, who can grant one of his personas to the particular gift giver. The information, along with billing information from the gift giver, is used to fill out a vendor online form.



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FIG. 1B

00000000000000000000



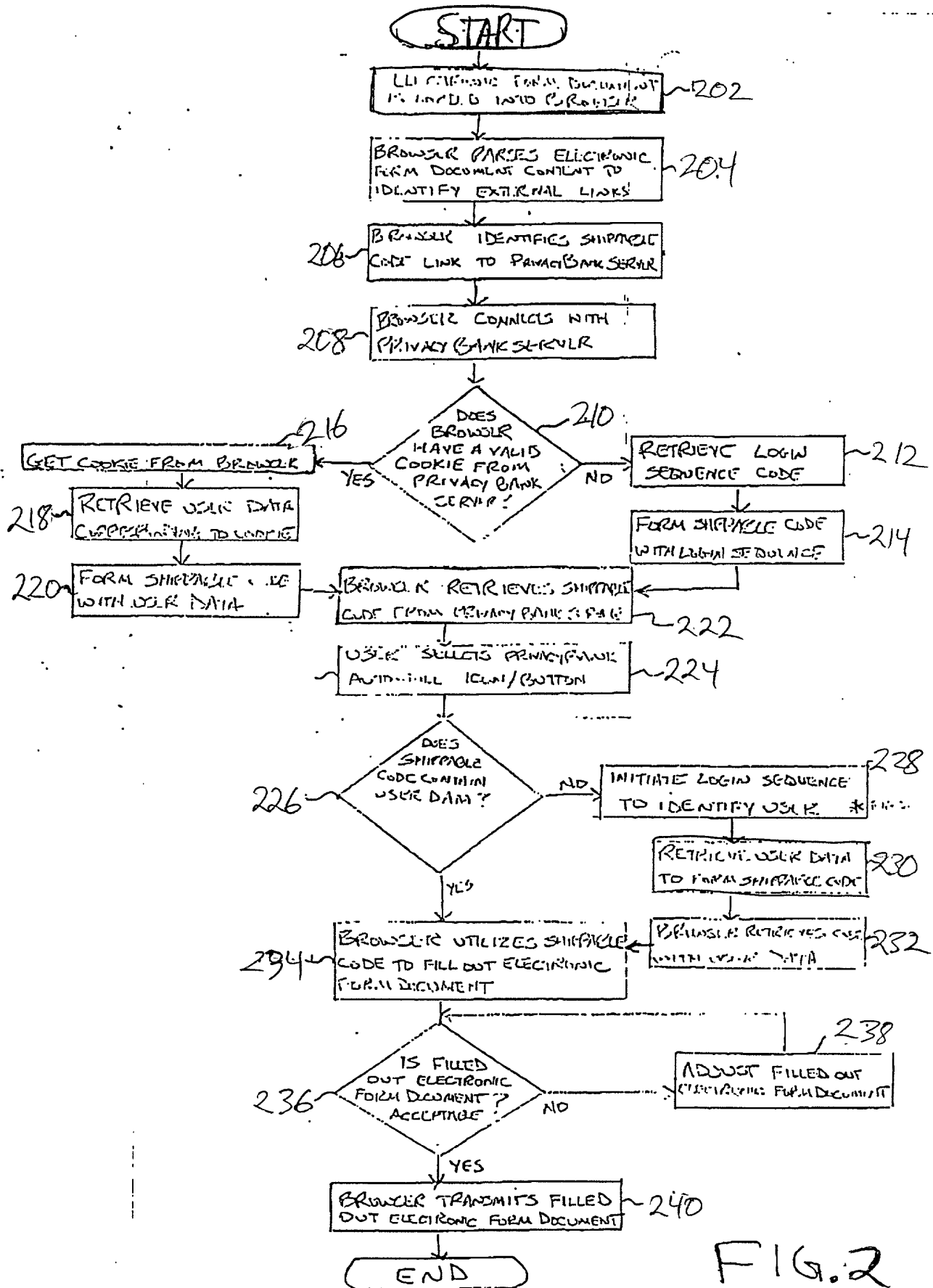


FIG 3A

312 302 → 304 306 308 310

User.	Category	Type	Short display name
Home.	Physical Contact Information, Online Contact Information, Demographic Data	Info.	Home
Work.	Physical Contact Information, Online Contact Information, Demographic Data	WorkInfo.	Work
Billing.	Physical Contact Information, Online Contact Information, Demographic Data, Financial Data	BillingInfo.	Billing
Shipping.	Physical Contact Information, Online Contact Information, Demographic Data	Info.	Shipping

320 322 →

Info.	Category	Type	Short display name
Name.	Physical Contact Information, Demographic Data	PersonName.	Name
Address.	Physical Contact Information, Demographic Data	Address.	Postal Address
Phone.	Physical Contact Information	PhoneNum.	Phone Number
Fax.	Physical Contact Information	PhoneNum.	Fax Number
Internet.	Online Contact Information	Internet.	Internet

WorkInfo.	Category	Type	Short display name
Name.	Physical Contact Information, Demographic Data	PersonName.	Name
Employment.	Demographic Data	Employment.	Employment
Address.	Physical Contact Information, Demographic Data	Address.	Postal Address
Phone.	Physical Contact Information	PhoneNum.	Phone Number
Fax.	Physical Contact Information	PhoneNum.	Fax Number
Internet.	Online Contact	Internet.	Internet

Table 1. Continued	
Variable	Mean (SD)
Age (years)	60.2 (10.5)
Gender (male/female)	10/10
Marital status (married/divorced/separated/widowed)	10/1/0/0
Education (years)	12.5 (2.5)
Occupation (unemployed/employed)	10/0
Income (USD/month)	1,200 (200)
Health status (good/fair/poor)	10/0/0
Smoking status (smoker/non-smoker)	10/0
Alcohol consumption (yes/no)	10/0
Family size (number of children)	2.5 (1.5)
Number of visits (per month)	1.5 (0.5)
Cost of services (USD/month)	50 (10)
Health insurance (yes/no)	10/0
Access to care (yes/no)	10/0
Health status (good/fair/poor)	10/0/0
Smoking status (smoker/non-smoker)	10/0
Alcohol consumption (yes/no)	10/0
Family size (number of children)	2.5 (1.5)
Number of visits (per month)	1.5 (0.5)
Cost of services (USD/month)	50 (10)
Health insurance (yes/no)	10/0
Access to care (yes/no)	10/0

324
↳

2

5

PhoneNum.	Category	Type	Short display name
AreaCode	Physical Contact Information	Text	Area Code
Number	Physical Contact Information	Text	Number
Extension	Physical Contact Information	Text	Extension

Table 1	
Parameter	Value
1. α	0.05
2. β	0.05
3. γ	0.05
4. δ	0.05
5. ϵ	0.05
6. ζ	0.05
7. η	0.05
8. θ	0.05
9. ι	0.05
10. κ	0.05
11. λ	0.05
12. μ	0.05
13. ν	0.05
14. ξ	0.05
15. \omicron	0.05
16. π	0.05
17. ρ	0.05
18. σ	0.05
19. τ	0.05
20. υ	0.05
21. ϕ	0.05
22. χ	0.05
23. ψ	0.05
24. ω	0.05
25. Ω	0.05
26. Θ	0.05
27. Φ	0.05
28. Ψ	0.05
29. Ξ	0.05
30. Υ	0.05
31. Σ	0.05
32. Π	0.05
33. Λ	0.05
34. Γ	0.05
35. Δ	0.05
36. Σ	0.05
37. Π	0.05
38. Λ	0.05
39. Γ	0.05
40. Δ	0.05
41. Σ	0.05
42. Π	0.05
43. Λ	0.05
44. Γ	0.05
45. Δ	0.05
46. Σ	0.05
47. Π	0.05
48. Λ	0.05
49. Γ	0.05
50. Δ	0.05
51. Σ	0.05
52. Π	0.05
53. Λ	0.05
54. Γ	0.05
55. Δ	0.05
56. Σ	0.05
57. Π	0.05
58. Λ	0.05
59. Γ	0.05
60. Δ	0.05
61. Σ	0.05
62. Π	0.05
63. Λ	0.05
64. Γ	0.05
65. Δ	0.05
66. Σ	0.05
67. Π	0.05
68. Λ	0.05
69. Γ	0.05
70. Δ	0.05
71. Σ	0.05
72. Π	0.05
73. Λ	0.05
74. Γ	0.05
75. Δ	0.05
76. Σ	0.05
77. Π	0.05
78. Λ	0.05
79. Γ	0.05
80. Δ	0.05
81. Σ	0.05
82. Π	0.05
83. Λ	0.05
84. Γ	0.05
85. Δ	0.05
86. Σ	0.05
87. Π	0.05
88. Λ	0.05
89. Γ	0.05
90. Δ	0.05
91. Σ	0.05
92. Π	0.05
93. Λ	0.05
94. Γ	0.05
95. Δ	0.05
96. Σ	0.05
97. Π	0.05
98. Λ	0.05
99. Γ	0.05
100. Δ	0.05

Internet	Category	Type	Short display name
Email	Online Contact Information	Text	Email
HomePage	Online Contact Information	Text	Home Page

Employment.	Category	Type	Short display name
Employer	Demographic Data	Text	Employer
Department	Demographic Data	Text	Department
JobTitle	Demographic Data	Text	Job Title

CreditCard.	Category	Type	Short display name
Type	Financial Data	Text	Card Type
Number	Financial Data	Text	Account Number
ExpMonth	Financial Data	Text	Expiration Month
ExpYear	Financial Data	Text	Expiration Year

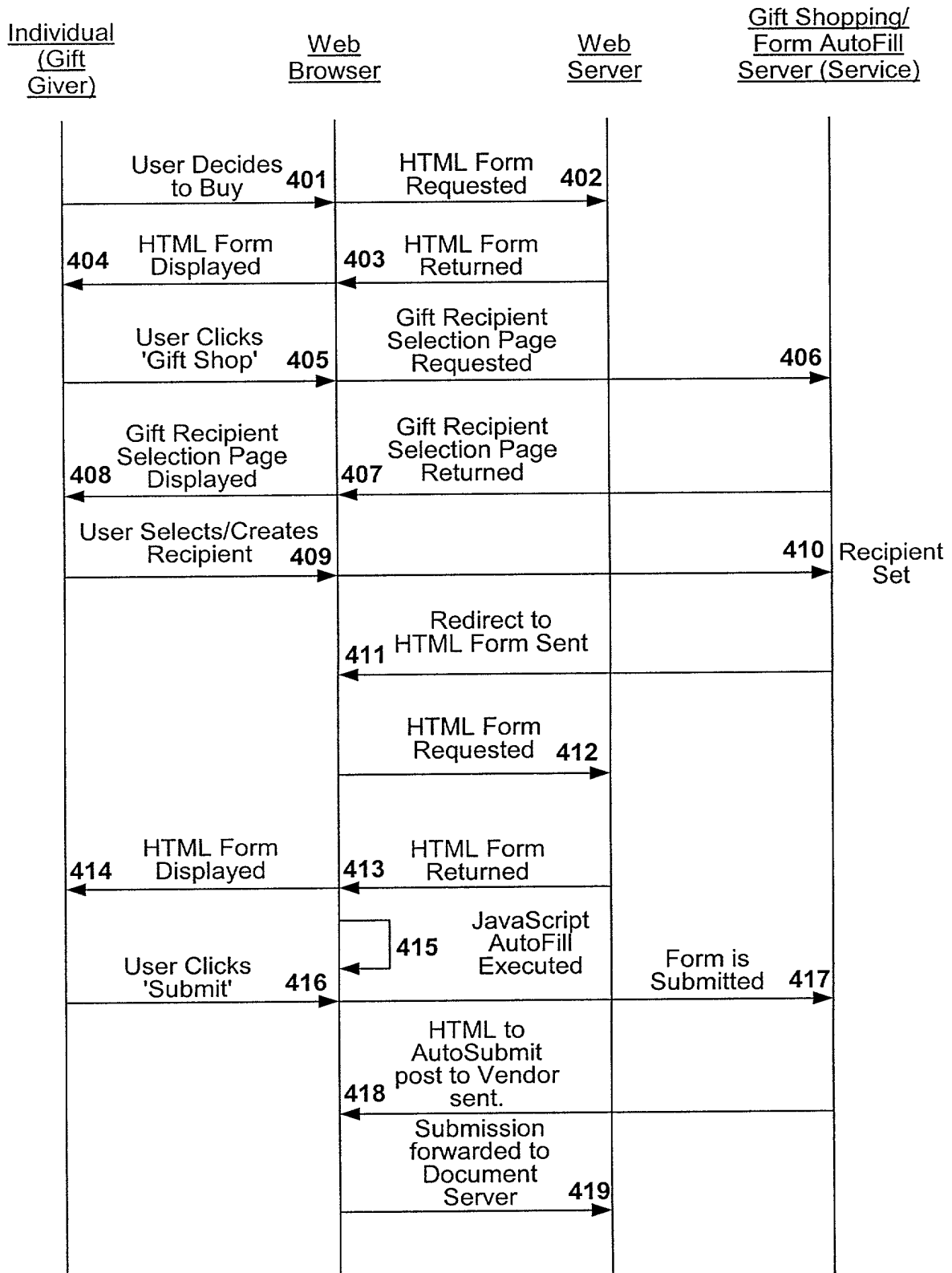


Figure 4

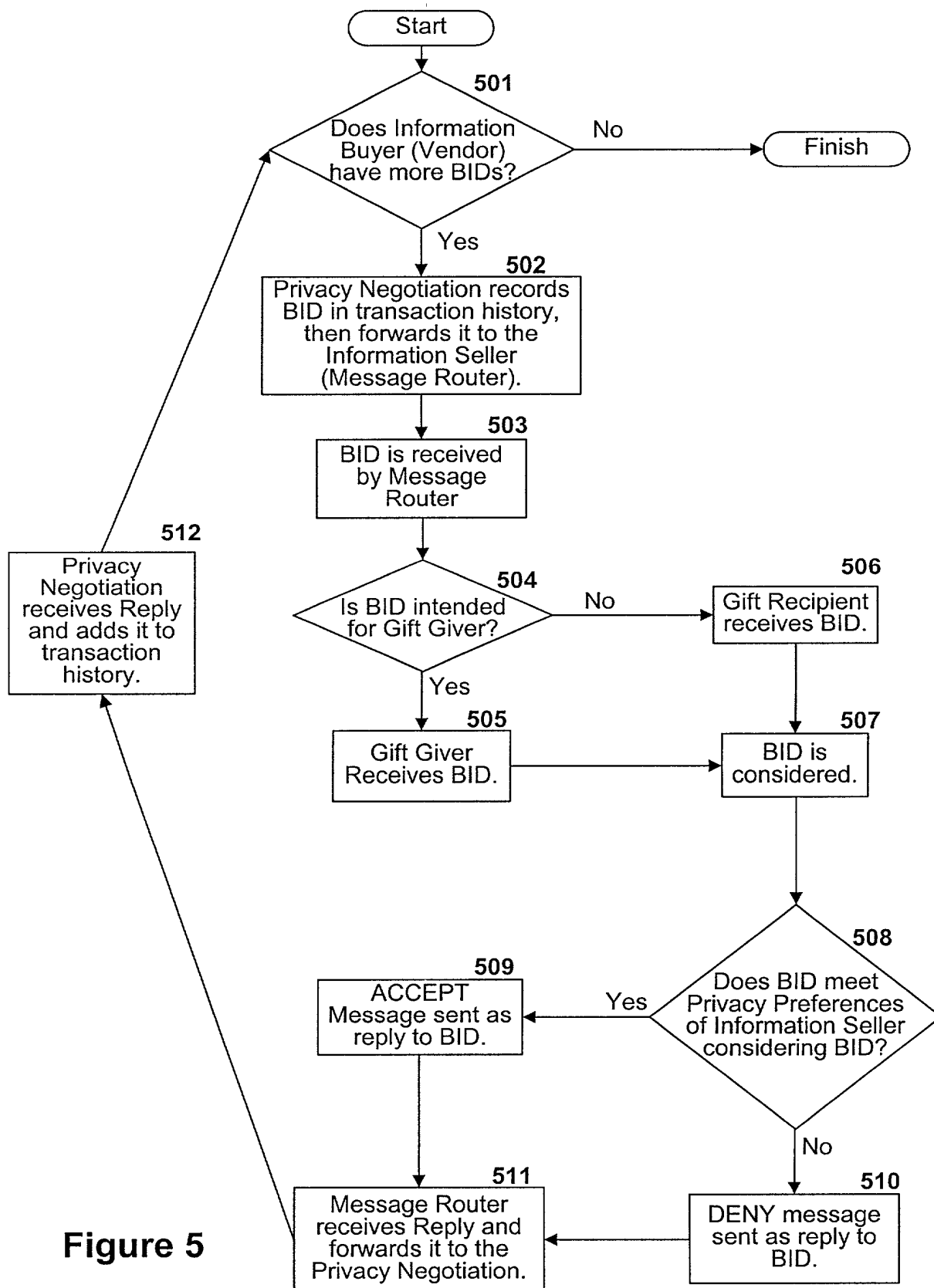


Figure 5

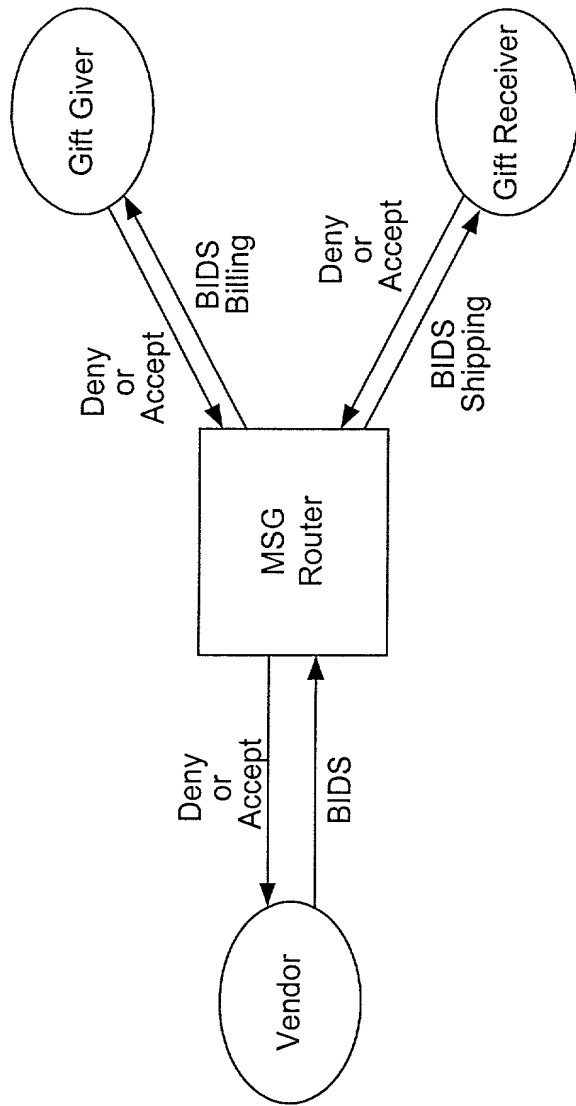


Figure 6

DECLARATION AND POWER OF ATTORNEY FOR ORIGINAL U.S. PATENT APPLICATION

Attorney's Docket No. **MLLTP006**

As a below-named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe that I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: **Method and Apparatus for Online Information Sharing for Completing Electronic Forms** the specification of which,

(check one)

1. ☐ is attached hereto.
2. ☒ was filed on March 10, 2000 as
U.S. Application No. _____
and was amended on _____.
3. ☐ was filed on _____ as
International PCT Application No. _____
and was amended on _____.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, CFR § 1.56.

Prior Foreign Application(s)

I hereby claim foreign priority benefits under Title 35, United States code, § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed:

			Priority Benefits Claimed?
			Yes ___ No ___
_____ (Application No.)	_____ (Country)	_____ (Filing Date)	
_____ (Application No.)	_____ (Country)	_____ (Filing Date)	Yes ___ No ___

Provisional Application(s)

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:

<u>60/123.605</u> (Application No.)	<u>March 10, 1999</u> (Filing Date)
_____ (Application No.)	_____ (Filing Date)

Prior U.S. Application(s)

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s), or § 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

_____ (Application No.)	_____ (Filing Date)	_____ (Status - patented, pending, abandoned)
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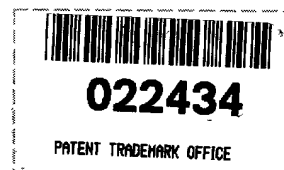
_____ (Application No.)	_____ (Filing Date)	_____ (Status - patented, pending, abandoned)
----------------------------	------------------------	--

Power of Attorney

And I hereby appoint the law firm of **Beyer Weaver Thomas & Nguyen, LLP** and all practitioners who are associated with the Customer Number 022434 as my principal attorneys to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

Direct Correspondence To:

Customer Number: 022434
BEYER WEAVER THOMAS & NGUYEN, LLP
P.O. Box 130
Mountain View, CA 94042-0130



Direct Telephone Calls To:

Rupak Nag at telephone number (510) 843-6200

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

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Inventor's signature:

Date of Signature: _____

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